

NEW SPECIES OF *LORETA* AND *ICAIA* (HOMOPTERA: CICADELLIDAE) FROM BOLIVIA AND PERU¹

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ABSTRACT: Three species of *Loreta*, *L. fiski* n.sp. (Peru), *L. Albopunctata* n.sp. (Bolivia), *L. vista* n.sp. (Bolivia) and a species of *Icaia*, *I. montana* n.sp. (Bolivia), are described.

The genus *Loreta* was described by Linnavuori (1959). New species were described by Linnavuori and DeLong (1978, 1979). The genus *Icaia* was described by Linnavuori (1973). Linnavuori and DeLong (1976) described a Peruvian species. Three new species of *Loreta* and a new Bolivian species of *Icaia* are described in this paper. All types are in the DeLong collection, Ohio State University.

Loreta fiski n.sp. (Figs. 1-5)

Length of male 3.8 mm. Female unknown. Crown produced, angled, 3/4 as long at middle as wide between eyes at base. Color: crown mostly orange except a v-shaped white spot at apex, a slightly larger angled white spot each side between apex and eye, and a white elongate band extending along eyes and across base, except for a slight interruption at middle; all white markings margined with black. Pronotum mostly grayish brown, a median narrow white band between eyes at base and a rather large roundish grayish spot at middle of pronotum behind each eye. Scutellum orange, 2 median white spots at base, a small white spot in each basal angle and a small median white spot each side and at apex. Forewings greyish white subhyaline, veins dark brown, with a few irregular brownish spots on clavus. Claval area with numerous cross veins.

Male genital plates (fig. 2) 2 times as long as wide at middle, apices narrowed, rounded. Style (fig. 5) with apophysis curved laterally and pointed. Aedeagus with 2 blade-like structures arising at base and extending laterocaudally (fig. 1). Aedeagal shaft rather small, L-shaped laterally (fig. 3), apex bluntly pointed. Pygofer narrowed, rounded apically (fig. 4).

Holotype male: Tingo Maria, Peru 19-VI-1982 at light, Frank Fisk coll. Paratypes: 2 ♂ Bolivia, Santa Cruz 21-IX-1980 Donald Foster coll.

L. fiski differs from all described species of *Loreta* by having 2 blade-like structures arising at base of aedeagus and extending beyond the narrow angled aedeagal shaft.

I take pleasure in naming this leafhopper for the collector, Frank Fisk.

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Loreta albopunctata n.sp.
(Figs. 6-10)

Length of male 3.5 mm, female 4 mm. Crown bluntly angled, more than 2/3 as long at middle as wide between eyes at base. Color: crown whitish, with 2 large squarish proximal brown spots between eyes. Pronotum mostly brownish or dark gray with a whitish area behind each eye and along apical margin. Scutellum white with a brown spot in each basal angle. Forewings brownish, subhyaline with large white spots at apex of claval veins on commissure and on middle of costa. Brown spots on costa and veins margined with darker brown.

Female 7th sternum with posterior margin broadly, concavely rounded.

Male genital plates 2 times as long as wide at middle (fig. 9), apex slightly narrowed, rounded. Style elongate (fig. 8) apical 5th narrowed, rounded. Aedeagus with apical 4th consisting of a process curved dorsally (fig. 7), a long slender process arises at base and extends latero-dorsally. Pygofer rounded apically with a curved hook (fig. 10) extending caudally on ventro-caudal margin. Pygofer bearing macrosetae on dorsocaudal margin.

Holotype male: Bolivia, Santa Cruz 1-VI-1980, Donald Foster coll. Paratypes: 1 ♀ same data except 21-IX-1980.

L. albopunctata is related to *L. obtecta* Linnavuori (1959, p. 134) and can be separated from it by the more narrowed, curved portion of the aedeagus, in lateral view.

Loreta vista n.sp.
(Figs. 11-15)

Length of male 3.5 mm. Female unknown. Crown bluntly angled, as long at middle as wide between eyes at base. Color: crown white with broad, transverse orange band between anterior portions of eyes. A slight orange ring around white apex. Pronotum dark brownish gray with paler area on each lateral margin. Scutellum white, tinted with orange, with black basal angles. Forewings pale grayish, subhyaline, with a few darker spots on clavus, veins mostly brown.

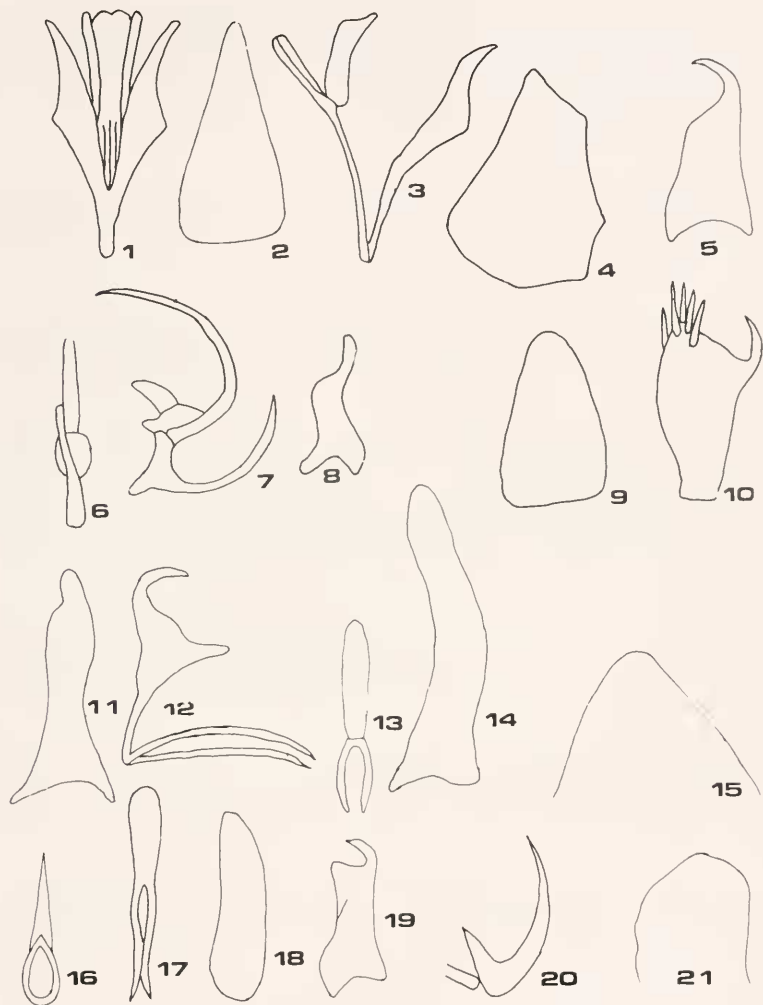
Male genital plates 4 times as long as wide at middle (fig. 14), apices rounded. Style elongate with bluntly rounded apophysis extending caudally (fig. 11). Aedeagus with slender basal portion, broadened at middle dorsoventrally (fig. 12), apical portion narrowed, curved ventrally; with 2 slender processes, 3/4 length of shaft (fig. 12), arising at base of shaft and extending ventrally. Pygofer rounded apically (fig. 15).

Holotype male: Bolivia, Buena Vista 21-V-1980, Donald Foster coll.

L. vista is related to *L. ornaticeps* Linnavuori (1959, p. 155) from which it can be separated by the more broadened (dorsoventrally) central portion of the aedeagus and by the 2 long slender processes arising from its base.

Icaia montana n.sp.
(Figs. 16-21)

Length of male 3.5 mm. Female unknown. Crown bluntly angled, a little wider between eyes at base than long at middle, margin bluntly angled with face. Color: crown pale yellowish with a small black spot at apex, a broad transverse black band, broadened at middle, extending between eyes. Pronotum variable in color, yellowish with disc black and black vermiculate spots on basal half, or almost entirely black. Scutellum black. Forewings black, heavily sclerotized, rugose, extending to 8th tergite.



Figs. 1-5. *Loretia fiski* n.sp. 1. aedeagus ventrally, 2. plate ventrally, 3. aedeagus laterally, 4. pygofer laterally, 5. style ventrally. Figs. 6-10. *L. albopunctata* n.sp. 6. aedeagus ventrally, 7. aedeagus laterally, 8. style ventrally, 9. plate ventrally, 10. pygofer laterally. Figs. 11-15. *L. vista* n.sp. 11. style ventrally, 12. aedeagus laterally, 13. aedeagus ventrally, 14. plate ventrally, 15. pygofer laterally, apical portion. Figs. 16-21. *Icaia montana* n.sp. 16. aedeagus ventrally, 17. connective ventrally, 18. plate ventrally, 19. style ventrally, 20. aedeagus laterally, 21. pygofer laterally, apical portion.

Male genital plates elongate, 4 times as long as wide at middle (fig. 18). Style narrow, elongate (fig. 19), with finger-like apophysis curving laterally. Aedeagus large at base, curving dorsally (fig. 20) and tapered to a slender pointed apex. Connective long and narrow with the basal portion divided and the 2 portions contiguous on basal fourth (fig. 17) Pyrofer rounded apically (fig. 21).

Holotype male: Bolivia, Cochabamba, 20-V-1980. Paratypes 1 ♂ same data as holotype; 1 ♂ 12-V-1981. All specimens collected by Donald L. Foster.

I. montana is related to *I. appendiculata* Linnavuori and DeLong (1967, p. 32) and can be separated from it by the simple curved and tapered aedeagus without apical processes.

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A collection of 30 papers from a 1981 symposium aimed at methods of stopping insects that vector parasites.

NEUROHEMAL ORGANS OF ARTHOPODS: THEIR DEVELOPMENT, EVOLUTION, STRUCTURES, AND FUNCTIONS. A. Gupta, Ed. 1983. Chas. C. Thomas, Pub. 629 pp. \$74.50.

Twenty contributions, including 13 on Insecta, updating available information on the development, evolution, structure and functions of the neurohemal organs of arthropods.

ADVANCES IN GENETICS, DEVELOPMENT, AND EVOLUTION OF *DROSOPHILA*. S. Lakovaara, Ed. 1982. Plenum Press. 470 pp. \$57.50.

This volume offers 37 papers on current research on *Drosophila*, from the morphological to the molecular.